Remarks

Claims 1-3, 5, 7-10, 12-13, 15-16, 18, 21 and 31-32 are pending. Claim 1 is amended. Claims 1 and 31 are independent. Claims 31 and 32 are new.

Claim Rejections

Claims 1-3, 5 and 7-9 have been rejected under 35 U.S.C.§ 102(e) as being clearly anticipated under Takeuchi et al. (U.S. Pat. No. 6,295,269 B1). Applicant respectfully traverses this rejection.

Takeuchi et al. disclose an automatic balancing mechanism for a disk driver. As shown in Figs. 4 and 5, the automatic balancing mechanism of Takeuchi et al. includes two movable weight members 29 and 30 in an inner space beneath a turntable. The inner space also has two stoppers 31 and 32 and a fixed weight portion 33. During rotation, the fixed weight portion 33 functions as an eccentric rotor to forcibly offset the center of gravity from the axis of rotation, and the centrifugal force moves the two movable weight members 29 and 30 to appropriate positions for canceling an unbalance condition due to the offset of the center of gravity from the rotating axis. Further, during rotation stoppers 31 and 32, which are inwardly projected into the inner space from an outer wall of the inner space, allow the two movable weight members to move in a restricted sectoral area opposite to the center of gravity so that the rotor is free from vibrations due to the characteristic angular velocity.

A review of Takeuchi et al. indicates that Takeuchi et al. do not teach preventing movement of the two moveable members before the balancing operation is performed. For example, in Figs. 5, 6A, 6B, 7A-7C, 8 and 9, the two moveable members are free to move prior to any unbalance condition. Therefore, Takeuchi et al. do not teach a "limiter which prevents the movement of the balls before the balancing operation is performed," as recited by claim 1.

Further, Takeuchi et al. also do not teach, "a plurality of ribs formed on the floor surface for guiding movement of the balls and preventing the balls from gathering," as recited by claim 1 as amended. Rather, Takeuchi et al. appear to disclose portions 31 and 32 which extend along outer sidewall 25b rather than being formed on the floor surface. Also, portions 31 and 32 do not prevent the balls from gathering as indicated in Fig. 7B of Takeuchi et al.

Accordingly, claim 1 is allowable over the prior art. Regarding dependent claims 2, 3, 5 and 7-9, these claims are allowable for at least the same reasons as corresponding independent claim 1. Therefore, Applicant respectfully requests removal of this rejection.

Claims 9, 10, 12, 13, 15, 16, 18 and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Takeuchi et al. in view of Arkrai (JP 62-24052). Applicant respectfully traverses this rejection.

Initially, Applicant notes that the Examiner has indicated that there are joint inventors of this Application. However, there is only one inventor, Geun Hyuk Song, as indicated on the Declaration.

As discussed above, Takeuchi et al. fail disclose at least the above-identified deficiencies of independent claim 1 from which claims 9, 10, 12, 13, 15, 16, 18 and 21 depend. A review of Arkrai indicates that it fails to make up for the above-identified deficiencies.

Further, one of ordinary skill in the art would not be motivated to combine the inclined surface of Arkrai with Takeuchi et al. As shown in Fig. 1 of Arkrai, a function of the inclined surface of Arkrai is to move the balls into a chamber beneath the inclined surface. However, Takeuchi et al. do not disclose utilizing an upper and lower chamber for the movement of the balls. Therefore, it would not be obvious to one of ordinary skill in the art to utilize the inclined surface of Arkrai with Takeuchi et al.

Accordingly, claims 9, 10, 12, 13, 15, 16, 18 and 21 are allowable over the prior art. Therefore, Applicants respectfully request removal of this rejection.

New Claims

Newly added claims 31 and 32 are supported in the Specification on at least pages 8-10. Further, claim 31 is allowable because the prior art does not teach all the features claim 31 and claim 32 is allowable for at least the same reasons as claim 31 from which it depends.

Conclusion

In view of the above amendments and remarks, reconsideration of the rejection and allowance of claims 1-3, 5, 7-10, 12-13, 15-16, 18, 21 and 31-32 is respectfully requested.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to contact the Jayne Saydah (Reg. No. 48,796) at (703) 205-8000, in the Washington, D.C. area.

Applicant respectfully petitions under the provisions of 37 CFR 1.136(a) and 1.17 for a one-month extension of time in which to respond to the Examiner's Office Action. The Extension of Time Fee in the amount of $110.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By _____
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Attachment

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows:

1. (Amended) An auto balancing apparatus for a disk drive, comprising:

a ball casing having a racing space on a rotation member, said rotation member adapted to rotate a disk;

said racing space including a racing face [formed in the racing space] and a floor surface;

a plurality of balls which roll along the racing face for implementing a balancing operation; and

a guide for guiding movement of the balls,

wherein said guide includes a limiter [and] which prevents movement of the balls before the balancing operation is performed, [said limiter including a plurality of ribs formed on a floor surface in the racing space] and a plurality of ribs formed on the floor surface for guiding movement of the balls and preventing the balls from gathering.

Claims 31-32 have been added.